

Organisations/Societies			
ASME	American Society of Mechanical Engineers	ASTM	American Society for Testing Materials
ANSI	American National Standards Institute	API	American Petroleum Institute
BS	British Standards	NACE	National Association of Corrosion Engineers
ISO	International Standards Organisation	MSS	Manufacturer's Standardization Society

API 607	Testing of valves - Fire type-test requirements (Fire Test for Soft-Seated Quarter-Turn valves)
API 6FA	Specification for Fire Test for Valves
API 6D	Specifications for Pipeline Valves
NACE MR 0175	Petroleum and natural gas industries - Materials for use in H ₂ S-Containing environments in oil and gas production
NACE MR 0103	This NACE standard defines material requirements for resistance to sulfide stress cracking (SSC)
ISO 15848-1	Industrial valves - Measurement, test and qualification procedures for fugitive emission
ISO 5208	Pressure testing of valves - Industrial
API 594	Swing check & dual flap check valves
API 598	Valve Inspection and Testing
API 600	Steel Gate Valves
API 602	Compact Carbon Steel Gate Valves
API 603	Cast, Corrosion Resistance Gate Valves
API 608	Metal Ball Valves - Flanged, Threaded and Butt-Welding Ends (150&300)
API 609	Butterfly Valves - Lug-Type and Wafer-Type
API 622	Type Testing of Process Valve Packing for Fugitive Emissions
API 623	Cast Globe Valves
API 624	Fugitive Emission Standard for Rising Stem Valves
API 641	Fugitive Emission Standard for Quarter-turn Valves
ASME B16.34	Valves 2 Flanged, Threaded and Butt Welded End
ASME B16.10	Face-to-Face and End-to-End Dimensions of Valves
ASME B16.5	Pipe Flanges and Flanged Fittings
ASME B16.47	NPS 26 Through NPS 60 Metric/Inch Standard
ASME B16.25	Butt Welded Ends
ASME B16.11	Forged Fittings, Socket Welding and Threaded
ASME B16 1.20.1	FITTING WITH MALE THREAD ANSI/ASME B 1.20.1 (NPT) - CARBON STEEL
MSS SP-55	Quality Standard for Steel Castings for Valves
BS 1868	Specification for Steel Check Valves
BS 1873	Specification for Steel Globe Valves
BS 6755	Valve Test Standard

Standard Explanations

API 607

Testing of valves - Fire type-test requirements (Fire Test for Soft-Seated Quarter-Turn valves)

API 6FA

The purpose of API 6FA standard is to establish the requirements for testing and evaluating the pressure-containing performance of API 6A and API 6D valves

API 6D Specification for Pipeline Valves

Specification for pipeline valves (gate, ball, plug, and check valves) API 6D is the primary standard for valves used in mainline pipeline service, including gate, ball, plug and check valves. Occasionally refinery and petrochemical

NACE MR 0175

Petroleum and natural gas industries - Materials for use in H₂S-Containing environments in oil and gas production

NACE MR 0103

NACE MR 0103 Materials Resistant to Sulfide Stress Cracking in Corrosive Petroleum Refining

ISO 15848-1

Industrial valves — Measurement, test and qualification procedures for fugitive emissions

ISO 5208 Valve Test Standard

Incorporates an adoption of API 598 test standard. In addition, ISO 5208 includes leakage rate tables. Example -Leakage rate A is specified for soft seated valves and plug valves (zero leakage). ISO 5208 includes standards for gate,globe and check valves (EN 122661-1).

API 594 Check Valves - Tilt, Swing & Dual Flap, Flanged, Lug, Wafer & Butt Weld Ends

This standard covers the design, materials, face-to-face dimensions, pressure-temperature ratings, inspections, examination, and testing requirements for two types of swing, dual plate & tilt check valves.

API 598 Valve Inspection & Testing

API 598 covers the testing and inspection requirements for check, gate, globe, ball, plug & butterfly valves. Steel valve pressure ratings in ASME/ANSI B16.34 are required to determine API 598 test pressure for steel valves.



API Valve Applicable Standard 2024

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API 600 Cast Steel Gate Valves - Flanged & Butt Welding Ends

API 600 is the main steel gate valve specification. Valve design and construction criteria are specified, as well as materials and trim designations. An appendix covers information pertaining to pressure seal valves. ISO Standard 10434 is essentially the same as API 600, re-produced in the ISO format.

API 602 Compact Steel Gate, Globe & Check Valves - Flanged, Threaded, Welding and Extended-Body ends

API 602 is for 100 NB (4") & smaller forged steel gate, globe & check valves up to 1500 class. Valve design and construction criteria are specified, as well as materials and trim designations. This standard includes requirements for bellows seal gate valves. In 150, 300 and 600 class API 602 requires a thinner wall than ASME B16.34.

API 603 Cast Gate Valves Corrosion - Resistant, Flanged-End

API 603 covers light walled gate valves in sizes NPS 15mm to 600mm (1/2" through 24"), in classes 150, 300 & 600. These valves are used in applications where a thicker API 600 casting is not needed. However, the wall thickness normally conforms to ANSI B16.34 wall.

API 608 Steel Ball Valves - Flanged and Butt Welding Ends

Typically used for floating ball valves, API 608 is the purchase specification for class 150, 300, 600 and 800 class steel ball valves. Valves design and construction criteria are detailed. Trunnion mounted pipeline ball valves are manufactured to API 6D but API 608 is also allowable in refineries up to 500 NB (20").

API 609 Butterfly Valves - Lug-Type and Wafer-Type

API 609 is a specification for butterfly valves with lug-type and wafer-type configurations designed for installation between ANSI B16 flanges, 150 to 1500 class.

API 622

Type Testing of Process Valve Packing for Fugitive Emissions

API 623

API 623 is standard for globe valves in the downstream refining industry featuring thicker wall thickness and low emission requirement.

API 624

Fugitive Emission Standard for Rising Stem Valves, Gate valve, Globe Valve

API 641

Fugitive Emission Standard for Quarter-turn Valves, ball valve, butterfly valve, plug valve etc.

ASME/ANSI B16.34 Steel Valves - Flanged & Butt Welding Ends

ASME B16.34 is the standard in which steel valve pressure/temperature ratings are specified. It also offers additional valve specification data including non-destructive examination procedures for upgrading valves for special class service. Valves manufactured under B16.34 wall thickness minimums may not meet the minimum wall thickness required of API 600, API 623, API 594, API 608 (cast valves) & API 602 (forged valves).

ASME/ANSI B16.10 Face-to-Face Dimensions of Ferrous Valves

B16.10 specifies the face-to-face dimensions of all flanged and butt weld end valves. Screwed and socketweld end valve face-to-face dimensions are not included in this standard.

ASME B16.5

This standard covers pressure-temperature ratings, materials, dimensions, tolerances, marking, testing, and methods of designating openings for pipe flange and flanged fittings. ASME B16.5 standard covers Steel Pipe Flanges and Flanged Fittings from NPS 1/2 through NPS 24 Metric/Inch in pressure class 150 to class 2500.

ASME B16.47 Series A/Series B

This Standard covers pressure-temperature ratings, materials, dimensions, tolerances, marking, and testing for pipe flanges in sizes NPS 26 through NPS 60. included are flanges with rating class designations 75, 150, 300, 400, 600, and 900 with requirements given in both SI (Metric) and U.S. Customary units, with diameter of bolts and flange bolt holes expressed in inch units.

ASME B16.25

This Standard covers the preparation of butt welding ends of piping components to be joined into a piping system by welding. It includes requirements for welding bevels, for external and internal shaping of heavy-wall components, and for preparation of internal ends (including dimensions and tolerances). Coverage includes preparation for joints with the following: no backing rings; split or noncontinuous backing rings; solid or continuous backing rings; consumable insert rings; gas tungsten arc welding (GTAW) of the root pass.

ASME B16.11

Forged Fittings, Socket Welding and Threaded

ASME B1.20.1

Fitting with ame thread ANSI/ASME B 1.20.1 (NPT) for carbon steel



API Valve Applicable Standard 2024

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MSS SP-55 Quality Standard for Steel Castings for Valves, Flanges and Fittings and

MSS SP-55 outlines the visual inspection criteria for castings (& forgings). This specification is listed as part of the procedure under API598.

BS 1873 Specification for Steel Globe Valves

Now redundant only used for light industrial valves (1975) for oil & gas and refinery use. Refer to API 623. BS 1873 outlines specifications for flanged and buttweld end globe and stop check valves for petroleum petrochemical

BS 1868 Specification for Steel Check Valves

Now redundant (1975). BS 1868 outlines specifications for flanged and buttweld end check valves. API 594 is now expanded to includeswing and tilt check valves for upstream & refinery check valves. API 6D issued for pipeline

BS 6755 Valve Test Standard

Previously used by some European Manufacturers, now superseded by ISO 5208 (EN 12266-1) standard. It includes leakage rates and testing criteria for metal and resilient seated valves.

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▲ Make Pipeline Flow Control Safer and Smarter

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Ball Valve

[Fully Welded Ball Valve](#)
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[Trunnion Mounted Ball Valve](#)
[Top Entry Ball Valve](#)
[Metal Seated Ball Valve](#)
[Heating System Ball Valve](#)
[V Type Ball Valve](#)
[Anti-Abbrasive Ball Valve](#)
[Orbit Type Ball Valve](#)
[Lined Ball Valve](#)
[Oxygen Ball Valve](#)
[Cryogenic Ball Valve](#)

Butterfly Valve

[Triple Eccentric Metal Seat Butterfly Valve](#)
[Triple Offset Laminated Seat Butterfly Valve](#)
[High Performance Butterfly Valve](#)
[Double Eccentric Rubber Seat Butterfly Valve](#)
[Full Lining Butterfly Valve](#)
[Half Lining Butterfly Valve](#)
[PTFE Lining Butterfly Valve](#)
[Oxygen Butterfly Valve](#)
[Cryogenic Butterfly Valve](#)

Gate Valve

[Wedge Gate Valve](#)
[Stainless Steel Gate Valve API603](#)
[Through Conduit Gate Valve](#)
[Bellow Seal Gate Valve](#)
[Pressure Bonnet Gate Valve](#)
[Non Rising Stem Gate Valve](#)
[Knife Gate Valve](#)
[PTFE Lining Gate Valve](#)
[Cryogenic Gate Valve](#)

Globe Valve

[Bolted Bonnet Globe Valve](#)
[Pressure Bonnet Globe Valve](#)
[Stop Valve](#)
[Angle Globe Valve](#)
[Bellows Stop Valve](#)
[Non Rising Stem Gate Valve](#)
[Oxygen Globe Valve](#)
[Cryogenic Globe Valve](#)

Check Valve

[Lift Check Valve](#)
[Swing Check Valve](#)
[Vertical Lift Check Valve](#)
[Dual Plate Check Valve](#)
[PTFE Lining Check Valve](#)
[Oxygen Swing Check Valve](#)
[Axial Check Valve](#)
[Silent Duty Non-Return Valve](#)
[Silent Lift Check Valve](#)
[Butterfly Type Check Valve](#)
[Hammer Check Valve](#)
[Tilting Check Valve](#)

Forged Valve

[Forged Gate Valve](#)
[Forged Globe Valve](#)
[Forged Swing Check Valve](#)
[Forged Lift Check Valve](#)
[Forged Ball Valve](#)

Control Valve

[Single Seat Control Valve](#)
[Double Seat Control Valve](#)

Strainer

[Y Strainer](#)
[T Strainer](#)
[Basket Strainer](#)